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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,968	12/31/2001	Rajendran S. Michael	24975A	2158
22889	7590	07/13/2005	EXAMINER	
OWENS CORNING 2790 COLUMBUS ROAD GRANVILLE, OH 43023			BOYD, JENNIFER A	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/038,968

Applicant(s)

MICHAEL ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Request for Reconsideration

1. The Applicant's Remarks, filed April 26, 2005, have been entered and have been carefully considered. Claims 1 and 5 – 9 are pending. In view of Applicant's arguments, the Examiner withdraws all previously set forth rejections as detailed in Office Action dated January 6, 2005. After another search was conducted, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1 and 5 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel et al. (US 5,886,306) in view of Bae et al. (US 5,034,443) and further in view of Iwasa et al. (US 5,744,763).

Patel is directed to a layered acoustical insulating web (Title) suitable for vehicles, farm equipment, airplanes and trains.

As to claims 1, 5 and 6, Patel teaches a composite web comprising multiple layers of wood pulp which may be combined with synthetic fiber (column 2, lines 1 – 40). See Figure 3. The Examiner equates one of the middle layers to Applicant's "insulating layer" and the outer layers to Applicant's "structural layers". Patel notes that one side of the composite non-woven web can be coated with a barrier acoustic material such as reground PVC filled with an inert

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material (claim 7). Therefore, one of the outer layers can comprise a non-woven web and PVC as required by Applicant.

As to claim 9, Patel teaches that the layered acoustical insulating web can be used vehicles (column 1). It should be noted that the recitation of "hoodliner" is not given patentable weight at this time since the prior art meets the structural and/or chemical limitations set forth and there is nothing on record to evidence that the prior art product could not function in the desired capacity. The burden is shifted upon the Applicant to evidence the contrary.

Patel fails to teach that the PVC can further comprise a heat stabilizer.

Bae is directed to stabilizer composition for polyvinyl chloride resins and to improved resistance to degradation caused by heat useful in applications such as motor vehicle components (column 1, lines 5 – 20) such as headliners (column 5, lines 50 – 55). Bae teaches a polyvinyl chloride molded article stabilized by various heat stabilizers to provide resistance to the polyvinyl resin to deterioration, discoloration, reduction in melt viscosity and embrittlement (column 3, lines 45 – 55). Bae notes that the polyvinyl chloride resins can be shaped by standard plastics processing techniques and can be formed into a wide variety of motor vehicle parts for both interior and exterior use (column 5, lines 40 – 55).

It would have been obvious to incorporate heat stabilizer as suggested by Bae into the nonwoven covering layers of Patel motivated by the desire to create a headliner material which has superior resistance against deterioration, heat stability, reduction in melt viscosity and embrittlement.

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Patel in view of Bae fails to teach that the substrate comprises at least one lofted area and at least one compacted area as required by claim 1 and comprises a second lofted area and second compacted area as required by claim 7.

Iwasa is directed to a soundproofing insulator (Title) to be applied to automobile hoods, roof panels, floor panels or engine covers and to prevent noises from propagating outside or within the interior of a vehicle (column 1, lines 5 – 15). Iwasa teaches a soundproofing material comprising a pulverized rubber layer 11 containing rubber grains and outer covering layers 12 covering the pulverized rubber layer 11 (column 4, lines 55 – 65). Iwasa teaches that the covering layers 12 can comprise a nonwoven fabric (column 5, lines 15 – 25). Iwasa shows in the seventh embodiment that the soundproofing material comprises a plurality of dimple-like or hemispherical noise absorbing recesses 71 and ridges 72 (column 9, lines 60 – 67). See Figures 12 and 13. It is shown in the Figures that there are regions of various thicknesses. The Examiner equates the thicker areas to Applicant's "first and second lofted areas" and the thinner areas to Applicant's "first and second compacted areas". It should be noted that the lofted areas by virtue would have a dimension greater than the dimension of the compressed areas. The compressed areas are equated to Applicant's "at least one compacted area" and the thicker areas are equated to Applicant's "at least one lofted area". It should be noted that all structural limitations have been met, therefore, the Examiner submits that the compressed areas would inherently structurally enhance the liner and the thicker areas would inherently insulate against the transmission of sound and heat energy. Iwasa notes that the noise absorbing recesses 71, cavities

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73 and ridges formed in this embodiment enhances the rigidity of the soundproofing material compared with those having flat surfaces. Consequently, transportation and fitting become facile, notably improving workability (column 10, lines 45 – 55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to create the panel of Patel in view of Bae with lofted and compacted areas as shown in Iwasa motivated by the desire to create a soundproofing material with increased rigidity and workability.

As to claim 8, Patel in view of Bae and Iwasa discloses the claimed invention except for that the “first lofted area” has a thickness equal to about 3 to 25 times the thickness of the “first compacted area”. It should be noted that the thickness is a result effective variable. For example, as thickness increases, the layer becomes more rigid and provides a more insulating effect and as the thickness decreases, the layer becomes more flexible and provides a more structural supporting effect. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a composite with “first lofted area” has a thickness equal to about 3 to 25 times the thickness of the “first compacted area”, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness of both the “first lofted area” and the “first compacted area” to create the “first lofted area” having a thickness of 3 to 25 times the thickness of the “first compacted area” to optimize the insulating and structural support strength of the composite.

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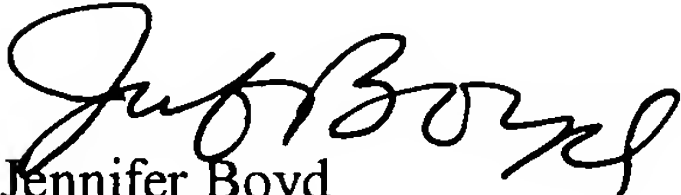
Response to Arguments


4. Applicant's arguments with respect to claims 1 and 5 - 9 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Boyd
July 10, 2005


Ula C. Ruddock
Primary Examiner
Tech Center 1700